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User's Manual

Setup and Compilation

1.) Download and unzip the submission from Github.

2.) The submission includes:

- main.c
- symbolTable.h
- symbolTable.c
- lexer.h
- lexer.c
- parser.h
- parser.c
- assembly.h
- assembly.c
- Makefile
- run (bash script)
- UsersManual.doc (this document)
- a1.in (input file)
- a2.in (input file)
- a3.in (input file)
- a4.in (input file)
- a5.in (input file)
- a6.in (input file)
- a7.in (input file)

- a8.in (input file)

3.) **Environment**: This program has been tested in the multi-platform lab and will run there.

4.) **Compiling**: This program includes a Makefile and a bash script. At the command line in Linux, type 'bash ./run' which will both compile and run the program. Or you can type 'make clean main' which will produce an executable called main.

5.) **Running the Program**: Be sure a1.in, a2.in, a3.in, a4.in, a5.in, a6.in, a7.in, a8.in files are in the same directory as the run bash script. Issue the command 'bash ./run' Files a1.in, a2.in, a3.in, a4.in, a5.in, a6.in, a7.in, a8.in are command line arguments but does not require the user to input them.

User input: No user interaction with the program is required.

Output: Some of the output goes to the console. Output will be similar to this:

```
Compiling a1.in
success
Identifiers: a, b

Compiling a2.in
Error Line 2: Identifier Cannot End with an Underscore

Compiling a3.in
success
Identifiers: a, b, c, d, e, f, ghijk, hello

Compiling a4.in
Error Line 5: syntax error expected ')'

Compiling a5.in
success
Identifiers: a, b, c, d, e, f, ghijk, hello, e_tt

Compiling a6.in
Error Line 7: Syntax Error Expected '='
```

Compiling a7.in
success
Identifiers: a, b, c, d, e, f, ghijk_9876, hello, b_3, a_sdf

Compiling a8.in
Error Line 4: syntax error expected 'begin'

Some output will be written to output files (if the input file is successful then assembly code will be written to output file), files: a1.out, a3.out, a5.out, a7.out will have output.

Output written to an output file should be similar to this:

```
R0 = b
a  = R0
******[b]******
R0 = b
R1 = 2
R0 = R0 + R1
a  = R0
******[b,2,+]******
```